

Notice of Allowability

Application No.

10/617,494

Examiner

Chat C. Do

Applicant(s)

CLIFT, GRAHAM

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/22/2006.
2. ☒ The allowed claim(s) is/are 1-4, 6-12, 14-16, 18-20, 22-23, now renumber as 1-19.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date attached hereto.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2193

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. John L. Rogitz on 12/18/2006.

The application has been amended claims 1 and 16 as follows:

1. (Currently amended) A data bit counter having a width "w", comprising:

at least w counter stages, each stage receiving at least one carry bit, and at least one count bit, each stage executing logic on the count bit and carry bit to output at least one count bit and at least one carry bit to a next highest stage, the count bits output by the stages together representing a Gray counter count value, wherein, an n^{th} count bit has a value of $\text{gcount}(n)'$ after an active clock edge associated with the counter, and the logic includes determining $\text{gcount}(n)'$ using an XOR of a current count bit and (an output of AND of a previous count bit and a previous carry bit).

16. (Currently amended) A logic device executing method acts for counting a number of bits processed, the method acts comprising:

generating a carry bit chain useful for determining which, if any, higher order bits should change in a next clock cycle;

generating a count bit chain, the chains being dependent on each other; and
using the count bit chain to indicate a count of a number of bits, the device
including a Gray code counter using the chains, wherein the counter has a width "w" and
includes at least w counter, each stage receiving at least one carry bit, and at least one
count bit, each stage executing logic on the count bit and carry bit to output at least one
count bit and at least one carry bit to a next highest stage, the count bits output by the
stages together representing a Gray counter count value further wherein an n^{th} count bit
has a value of $\text{gcount}(n)'$ after an active clock edge associated with the counter, and the
logic includes determining $\text{gcount}(n)'$ using an XOR of a current count bit and (an output
of AND of a previous count bit and a previous carry bit).

Any comments considered necessary by applicant must be submitted no later than the
payment of the issue fee and, to avoid processing delays, should preferably accompany the issue
fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for
Allowance."

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Chat C. Do whose telephone number is (571) 272-3721. The
examiner can normally be reached on 7:00AM to 5:00PM M-Th.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the
organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2193

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C Do
Examiner
Art Unit 2193

December 18, 2006


MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100